

**COLLEGE AND CAREER READY
EXPECTATIONS FOR MATHEMATICS**

Observer: _____ Teacher: _____
Observation Date: _____ Observation Time: _____

At the heart of the Common Core State Standards is a substantial shift in mathematics expectations that demand deep engagement from students, instructional strategies that support student learning, and quality assessment strategies that support learning. The three key shifts required by the Common Core State Standards

1. **Focus:** Focus instruction strongly where the Standards focus (the major work of the grade)
2. **Coherence:** Think across grades, and link to major topics within grades
3. **Rigor:** In major topics pursue *conceptual understanding*, *procedural skill and fluency*, and *application* with equal intensity

High quality instruction aligned with the Common Core Standards will reflect a rich and diverse instructional approach fully aligned with these three shifts.

Expectations	Observed Practice	Notes to Guide Observation
--------------	-------------------	----------------------------

What to look for in each observation...

Engaging Students in Learning					
a. Does the math content of the activity concentrate heavily or entirely on the major work of the grade?	Yes	No			If asked, the teacher should be able to identify the 1-3 overarching concepts each year that comprise the <i>major work of the grade</i> .
b. Are key concepts clearly defined over the course of the lesson?	Yes	No			
c. Do materials and activities build on students' existing mathematical knowledge and skill?	Yes	No			Does the teacher make appropriate connections to students' prior knowledge?
d. Does student work include revisions, especially revised explanations and justifications?	Yes	No			Do revisions address problem-solving process rather than simply final answers?
e. Are students talking about each others' thinking?	Almost All	More than half	Less than half	Almost None	Are students reacting to others thinking, not just their own?
f. Are all students actively participating (i.e. boys, girls, ELL, and special education students)?	Almost All	More than half	Less than half	Almost None	Are students on task? Are students asking math questions?
g. Do students show persistence in continuing to examine difficult problems?	Almost All	More than half	Less than half	Almost None	Are students able to persevere through frustration to attempt to solve difficult problems?
Quality of Instructional Strategies & Discussion Techniques					
a. Do the instructional strategies used in the classroom demonstrate rigor? (Rigorous instructional strategies are characterized by the sub-categories below.)	Yes	No			The balance of the three aspects of rigor should occur over the course of the year rather than within a given task. Each aspect of rigor is not equally present in any given task.
i. <i>Conceptual understanding</i> : Is there tangible progress in every student's grasp of the mathematical concept under study?	Almost All	More than half	Less than half	Almost None	Students demonstrate the ability to solve conceptual problems in varied formats.
ii. <i>Procedural skill and fluency</i> : Is there tangible progress in every student's ability to carry out procedures and give accurate answers with reasonable quickness?	Almost All	More than half	Less than half	Almost None	Students are able to complete more problems with a higher rate of accuracy over the course of the class.
iii. <i>Application</i> : Do classroom activities require students to apply the mathematics they know to solve real world grade-appropriate problems?	Yes	No			Student can use procedural skill and/or conceptual understanding to solve real world problems.
b. Do students explain their thinking and build upon their own thinking?	Almost All	More than half	Less than half	Almost None	For example, students say a 'second sentence' to explain their thinking and connect it to their first sentence. A 'second sentence' can be spontaneous or prompted by the teacher or another
c. Do students use academic language in their explanations and discussions?	Almost All	More than half	Less than half	Almost None	Use of academic language can be spontaneous or prompted by either the teacher or other students.
d. Does the teacher insist on precision in student responses?	Almost All	More than half	Less than half	Almost None	
Assessing Student Work through Evidence					
a. Are math problems on both formal and informal assessments well-aligned to the grade-by-grade progressions as outlined in the Common Core State Standards?	Almost All	More than half	Less than half	Almost None	Teachers should be able to identify how the topic fits into the grade-by-grade progression of topics in the Common Core .
b. Do students receive prompt, specific feedback on their work and contributions in class?	Almost Always	Often	Rarely	Almost Never	Teacher feedback should prompt students to identify errors in processes rather than only final answers .
c. Can students be observed completing a series of short problems as well as long problems during class?	Yes	No			All students are completing short and longer problems across the course of a class.
Key Practices and evidence to look for over the course of the year...					
Rigor : Do the balance of assignments comprehensively reflect each component of rigor in the major work of the grade (conceptual understanding, procedural skill and fluency, and application)?	Highly balanced	Somewhat balanced	Not balanced		While individual assignments or tasks may focus on specific aspects of rigor, over the course of the year an equal balance of the three aspects should be achieved.
Focus : Does the major work of the grade account for at least 70% of the total classroom assignments across the course of a year?	Yes	No			If asked, a teacher can identify whether an assignment is part of the major work of the grade and indicate what percentage of assignments fall into the major work of the grade.
Student Progress : Does student work show progress over time?	Yes	No			